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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,503	07/13/2000	NOBUAKI HASHIMOTO	101929.02	3462

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EXAMINER	
GRAYBILL, DAVID E	

ART UNIT	PAPER NUMBER
2827	

DATE MAILED: 04/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/615,503	HASHIMOTO, NOBUAKI	
	Examiner	Art Unit	
	David E Graybill	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *10 and 11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 12-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Applicant's election with traverse of the species of Figure 6 in the paper filed 2-13-3 is acknowledged. The traversal is on the ground that, "the search and examination of the entire application could be made without serious burden." This is not found persuasive because the reasons for insisting on restriction as stated in MPEP 808 have been clearly met.

The requirement is still deemed proper and is therefore made FINAL.

Claims 10 and 11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

The terminal disclaimer filed on 4-24-2 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 6,057,174 has been reviewed and is accepted. The terminal disclaimer has been recorded.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point

out and distinctly claim the subject matter which applicant regards as the invention.

In claims 7 and 8 the limitation, "cutting the substrate into the semiconductor chips" appears to be grammatically incorrect and is incomprehensible.

Claims 7 and 8 have not been rejected over the prior art because, in light of the 35 U.S.C. 112 rejections supra, there is a great deal of confusion and uncertainty as to the proper interpretation of the limitations of the claims; hence, it would not be proper to reject the claims on the basis of prior art. As stated in In re Steele, 305 F.2d 859, 134 USPQ 292 (CCPA 1962), a rejection should not be based on considerable speculation about the meaning of terms employed in a claim or assumptions that must be made as to the scope of the claims. See also MPEP 2173.06.

In the rejections infra, reference labels are generally recited only for the first recitation of identical claim language.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the

> invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 9 and 12-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Shim (5905633).

At column 1, line 18 to column 2, line 1, and column 3, line 51 to column 5, line 46, Shim teaches the following:

1. A method of fabricating a semiconductor device comprising: (a) attaching a plurality of semiconductor chips 20 to a tape 60; (b) cutting the tape to obtain substrates ["individual packages"]; and (c) providing a plurality of external terminals 50 on each of the substrates, wherein the steps (a) and (b) are carried out in a reel-to-reel transport system.

2. The method of fabricating a semiconductor device as defined in 1, further comprising: attaching a reinforcing member 10 to the tape in positions corresponding to each of the semiconductor chips, before the step (b).

3. The method of fabricating a semiconductor device as defined in 1, wherein the tape is cut into regions 64 each including one of the semiconductor chips in the step (b).

4. The method of fabricating a semiconductor device as defined in 2, wherein the tape is cut into regions each including one of the semiconductor chips in the step (b).

9. The method of fabricating a semiconductor device as defined in 1, wherein a plurality of device holes 61 are formed in the tape, and leads 11 are formed on the tape, which end portions project into the respective device holes; and wherein each of the semiconductor chips is disposed within a respective one of the device holes, and the electrodes ["chip pads"] of the semiconductor chips and the leads are bonded in the step (a).

12. The method of fabricating a semiconductor device as defined in 1, wherein each of the semiconductor chips is bonded to the tape in a face-up configuration in the step (a).

13. The method of fabricating a semiconductor device as defined in 12, wherein the electrodes of the semiconductor chips and leads formed on the tape are electrically connected by means of wires 30 in the step (a).

14. The method of fabricating a semiconductor device as defined in 1, further comprising: attaching a heat radiating member 64 to each of the semiconductor chips.

15. The method of fabricating a semiconductor device as defined in 2, further comprising: attaching a heat radiating member to each of the semiconductor chips.

16. The method of fabricating a semiconductor device as defined in 1, further comprising: attaching the heat radiating member before the step (b), with a reel-to-reel transport system.

17. The method of fabricating a semiconductor device as defined in 2, further comprising: attaching the heat radiating member before the step (b), with a reel-to-reel transport system.

18. A semiconductor device fabricated by the method as defined in 1.

19. A circuit board ["mother board"] having mounted the semiconductor device as defined in 18.

20. An electronic apparatus ["BGA package"] including the semiconductor device as defined in 18.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Shim as applied to claims 1-4, 9 and 12-20, and further in combination with Horton (6326696).

Shim does not appear to explicitly teach the following:

5. The method of fabricating a semiconductor device as defined in 1, wherein the tape is cut into regions each including two or more of the semiconductor chips in the step (b).

6. The method of fabricating a semiconductor device as defined in 2, wherein the tape is cut into regions each including two or more of the semiconductor chips in the step (b).

Nonetheless, at column 3, lines 16-35, Horton teaches regions each including two semiconductor chips 16, 18. Moreover, it would have been obvious to combine the process of Horton with the process of Shim because it would enable high circuit density.

Applicant's remarks filed 4-24-2 have been fully considered and rendered moot by the rejection supra.

The art made of record and not applied to the rejection is considered pertinent to applicant's disclosure. It is cited primarily to show inventions similar to the instant invention.

Any telephone inquiry of a general nature or relating to the status (MPEP 203.08) of this application or proceeding should be directed to Group 2800 Customer Service whose telephone number is 703-306-3329.

Any telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (703) 308-2947. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.

The fax phone number for group 2800 is 703/3087724.

David E. Graybill
Primary Examiner
Art Unit 2827

D.G.
16-Apr-03